

‘No one wishes to say that you are to live on preserved meats’: Canning and Disruptive Narratives in Nineteenth-Century Food Writing

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Our foodways are inextricable from material technology, and meanings ascribed to those technologies often remarkably change consumption patterns. The implements and techniques intertwined in our lives as we engage with food typically go through long processes of adaptation, as they are interpreted and shaped by producers and users. More than technology itself, it is the presentation and reception of technologies by *people* that determines success. While changes wrought by material technologies can be powerful, they can simultaneously be disruptive: embedded in people-driven narratives that they upend and unsettle.

Experimentation, the economy, new ingredients and materials have always resulted in new cooking techniques. The function of British kitchens shifted dramatically from the Early Modern to the Modern period, and scholars including Sara Pennell have shown that ‘[t]he pre-1900 kitchen was emphatically not, as at least one eminent historian of modern design has suggested, “rarely a seedbed for innovation”’ (2016, p.13). The material technology this paper addresses was ‘new’ in the nineteenth century – as much as a technology can be new, having been derived from pre-existing practices. It was involved in the preservation of meat and changed British and global consumption: canning. This paper looks to the periphery of canning’s history by turning to texts that interpreted canning in nineteenth-century Britain. Canning is encoded in narratives that speak to multiple issues being played out in the period, and the language and debates at play within cookbooks and periodicals elucidate that people’s reactions to technologies actively reconfigure the way food functions within society.

Methods of preserving meat, including potting it in ceramic jars or keeping it in manmade icehouses (structures built underground or near sources of water, typically in country estates), were longstanding before the nineteenth century. Done in or close to the home, these methods ensured foods would last. Yet preserving on small, domestic scales often required locally sourced ingredients, time, and space, and from the beginning of the nineteenth century these were increasingly unavailable. Population migration from the countryside saw the rural labouring classes moving into towns and cities, searching for jobs that were increasing due to mechanisation. As Andrea Broomfield notes:

In 1801, there were only five towns aside from London with over 50,000 inhabitants: Birmingham, Bristol, Leeds, Liverpool and Manchester. By 1851, these were joined by seventeen more. By that same year, roughly half the population was located in urban areas (2007, pp.89–90).

One of the biggest changes to daily life this redistribution brought was that people could no longer be self-sufficient in terms of food. Without land, space for preserving or locally foraged or grown ingredients, food was predominantly purchased from large producers and distributors who supplied towns and cities. Food had to travel, last longer and feed more people. The population was vastly expanding, doubling between 1800 and 1850 and then ‘doubl[ing] again from 17,900,000 to 36,000,000’ between 1851 and 1911’ (Burnett, 1989, p.115). These factors put British agriculture under increasing strain, and a similar story was being told in mainland Europe. Canning was intended as a solution to these issues.

Canning originated in France during the early 1800s, when French chemist Nicolas Appert developed a technique for sealing food in glass containers by corking them and boiling them in water (Shepphard, 2006, p.234). Appert’s ‘cans’ were soon commissioned by the French Navy and government. Canned food reduced the volume of fresh food carried in ships and on foot, meaning soldiers could have meat regularly without fear of it rotting or being unable to source food while travelling. After several demonstrations and a positive government report, Appert published his technique in 1810. It was in Britain, however, that canning became the material technology we are familiar with. Three months after Appert’s publication, Englishman Peter Durand patented a version of Appert’s technique. Durand’s patent covered the heat preservation of foods in tin canisters, glass and ceramic bottles, and other materials. Bryan Donkin bought Durand’s patent in 1813 and, working with Durand alongside John Gamble and John Hall, opened a factory in Bermondsey. Donkin & Hall identified tin-coated iron cans as the most effective container for canned foods: more durable than glass and the metal lids could be soldered on before heating, meaning the tins withstood higher heats for cooking the contents.

While this signalled the beginning of industrialised, heat-processed meat in metal cans, the trajectory of canned foods was complicated from the outset. Sue Shephard outlines Appert’s career once his technique crossed the Channel, and while he produced cans into the 1830s, others consistently adapted his techniques to better success. He died, ‘forgotten and abandoned’ in 1841 (Shephard, 2006, p.242), and his debt and erasure from the public eye testify that a technology’s success is dependent on marketing. Meanwhile, Durand and Donkin & Hall were ensuring their technique would be well-received in Britain. Before Donkin & Hall opened their factory, Durand manufactured a desire for tinned foods, giving

samples to naval captains to trial at sea. Durand sent positive testimonials to the Duke of Kent, and was contacted by the Duke's secretary:

[H]is Royal Highness having procured introduction of some of your patent beef on the Duke of York's table, where it was tasted by the Queen, the Prince Regent and several distinguished personages and highly approved. He wishes you to furnish him with some of your printed papers in order that His Majesty and many other individuals may according to their wish expressed have an opportunity of further proving the merits of the things for general adoption (Geoghegan, 2013).

This royal vote of confidence secured Royal Navy commissions for Donkin & Hall, who supplied canned meat to invalid, and eventually all, soldiers. Tactical sales and targeting influential clients paid off, marking the start of canned meat's success. Broomfield writes that 'by 1839, tin-coated steel containers were being used all over the world, and their popularity was clinched when in 1858 the can opener replaced the hammer and chisel as a convenient means to open them' (2007, p.18). This suggests the uptake of canned foods was uninterrupted, and by the mid-nineteenth century they were 'popular' with the British public. It was not until the mid-century, however, that canned foods were rigorously targeted at domestic consumers.

In 1851 at the Great Exhibition in London, John Gamble (who had taken the lead with the company) displayed a vast array of tinned foods, showcasing them as a novelty. Reports of the exhibition mention intact canisters from the factory's opening, and one that survived an Arctic Expedition in 1824 and was opened in 1849, 'still in excellent condition' (*The Examiner*, 1851, p.676). Aside from sensational testaments to the longevity of canned foods, Gamble displayed:

Canisters of preserved fresh beef, mutton, and veal; of fresh milk, cream and custards; of fresh carrots, green peas, turnips, beetroot, stewed mushrooms, and other vegetables; of fresh salmon, oysters, codfish, haddock and other fish; and of real turtle soup, mock-turtle soup, ox-tail, and other soups.

Preserved hams for use in India, China &c. Calpash, calipee, and green fat for making real turtle soup, all preserved by the same process. Also soup and bouilli, for emigrants and troops at sea; pheasants, partridges, &c., preserved (*The Examiner*, 1851, p.676).

This range, and the performative nature of displaying at the Great Exhibition, indicates Gamble's new focus on public consumers. Presenting foreign canned foods in a setting which showcased the wonders of the world brought to Britain via the Empire was a clever advertising move. It engendered canned food as an enabler of Empire given their naval uses, as an exotic spoil of exploration, and as a

signifier of Britain's technological prowess. These selling-points created a narrative of manifold success: culinary, imperial and technological, and by positioning his products as such Gamble elicited wonder from potential customers. Viewed in this light, canned foods were set to become a domestic hit. Scandal and the resulting interpretation of canned foods, however, disrupted this uptake: 'popularity' was a long way off.

On January 3rd, 1852, *The Times* broke scandalous news, disclosing 'horrible facts' about canned meats supplied to the Navy in Portsmouth (*The Times*, 1852, p.7). A quality-check had been ordered, and as *The Times* reported:

[O]ut of 2,707 canisters of meat opened, only 197 have proved fit for human food, those condemned for the most part containing such substances as pieces of heart, roots of tongue, pieces of palates, pieces of tongues, coagulated blood, pieces of liver, ligaments of the throat, pieces of intestines – in short, garbage and putridity in a horrible state, the stench arising from which is the most sickening and the sight revolting (*The Times*, 1852, p.7).

The cans in question had been predominantly supplied by Stephen Goldner, a British investor with a canning factory in Moldavia. The number of rotten cans was incriminating, and reportage accented the horrific state of the food through visceral and moral language: 'sickening', 'revolting', 'stench', and 'pestilence', for example (*The Times*, 1852, p.7). Aside from this rhetoric, *The Times* heightened the sense of fear surrounding canned foods by stating:

'[T]he consequences of such frauds as this cannot be too seriously estimated. Suppose, for instance, Franklin and his party to have been supplied with such food as that condemned, and relying upon it as their mainstay in time of need [...] may have bred a pestilence or famine among them and been their destruction' (*The Times*, 1852, p.7).

This referred to the expedition of Sir John Franklin, who left England with two ships in 1845 to map the Canadian Arctic coast. Lack of communication led to rising concerns about the expedition, and the story was closely followed by the press. Three bodies found on Beechey Island in 1850 heightened the worry that the expedition met an untimely end, and in 1852 connections were retrospectively made between victuals supplied by Goldner and the deceased men. Constantin Ardeleanu has detailed Goldner's career trajectory but the nail in the coffin, for the reputation of Goldner and canned foods, was the Portsmouth exposé. Medical evidence soon showed that 'Franklin's men faced a medical disaster clearly related to the meat provisions they had eaten' (Ardeleanu, 2012, p.673). Goldner's contract was rescinded and the press turned on him, accusing him of numerous fraudulent practices: 'There can be little doubt that the offal and

refuse of this factory is the 'preserved meat' which he has supplied to the English navy' (*Lloyd's Illustrated Newspaper*, 1852, p.5). From this point, Britain's view of canned meat was as spoiled as rotten meat itself, disrupting the domestic uptake of canned foods. The language of morality that characterised the press's condemnation framed canned meat as dangerous, disgusting, and a threat to national prosperity. Within months, the public's wonder at Gamble's display transfigured into horror due to the negative coverage. Yet, while these events and the relaying of them catalysed the public's distrust of canned foods, prejudice against them was not all-encompassing but also disrupted and challenged.

Shortly after the Portsmouth scandal, press articles began to hit back against incriminating coverage, presenting a defence of canned foods. The effort to rekindle the public's trust also enlisted narratives – not of fear and disgust, but of taste, empire, thrift and luxury. A *Fraser's Magazine* article published in April 1852 encapsulates the perilous position of canned foods:

But, says our reader, how can you get over the disgusting disclosures in our dockyards? How explain away the affecting picture of hardened commissioners fainting from the awful smell given forth by the putrid contents of the inspected canisters [...] How excuse or explain away the offal found in the canisters? We can only answer these questions by begging our reader to examine with us the true particulars of the case, unbiased by mere penny-a-line statements, seasoned high with horror to astonish the public (*Fraser's Magazine*, 1852, p.412).

These questions highlight how effective the press was in eliciting affect through revolting imagery and language. By recycling the sensationalised rhetoric, however, this author patronises it. Contrasting horrifying descriptions with the plea that readers ignore 'penny-a-line statements, seasoned high with horror' (*Fraser's Magazine*, 1852, p.412) makes the distrust of canned foods a matter of taste: not in food, but in writing. Readers who are set against canned food by what the *Fraser's* author perceives as low-brow, exaggerated journalism are fooled by cheap reportage and missing important facts. By directly addressing the reader via the 'says our reader' insertion (*Fraser's Magazine*, 1852, p.412), the author situates them in a dialogue where they choose where to stand concerning canned foods. The article proceeds with a factual report of the canning process, outlining Appert's initial experimentation, and the tone suggests that if readers believe the disgusted writings of journalists who slander canned foods, it is their loss.

Another article published in *Reynold's Miscellany* in May 1852 takes a similar approach: positively depicting canned food and discussing Appert's technique. By outlining the canning process, both articles bypass hysteria by giving readers the information necessary to understand canning. Stripped of its alien nature, canning could be coded as desirable. The *Reynold's* article notes that canned

foods meant 'the animal and vegetable kingdom would thus be at our command in all periods and seasons', and 'the housekeeper may add to his usually limited bill of fare many dainties and indulgences not otherwise available' (*Reynold's Miscellany*, 1852, p.232). Allusion to the domination of the natural world situates the home-cook in a position of power, returning to the narratives of Imperial success, exploration and dominance accented at the Great Exhibition. These narratives position the consumer of canned foods as an active participant in the Empire, as they integrate its spoils into British foodways. Canning was positioned as a technology that widened global horizons and reduced vulnerability: Britain was no longer at the mercy of agriculture but could access food from the entire globe. Canned foods thus created an advantage over nature itself, aligning with the British anthropocentric worldview of the time. Moreover, reference to 'many dainties and indulgences' (*Reynold's Miscellany*, 1852, p.232) correlates with Gamble's exotic ingredients to convey that canned foods could facilitate luxury. Examining this strand of the canning narrative opens up discussions of culinary taste and class.

On January 19th, 1852, Alexis Soyer, famous chef of the Reform Club, wrote to newspapers about the Portsmouth scandal. As one of the most well-known cookbook writers and culinary authorities of the time, Soyer's input carried weight. Furthermore, Soyer was famed for his engagement with material food technologies: he patented Soyer's Magic Stove (among other implements) and opened his kitchens to the public so they could marvel at his innovations. His word on canning was thus not inexperienced, and Soyer notes that after the scandal he 'inspect[ed] the contents of several canisters supplied to the Government stores, which were expressly opened for the purpose of my giving my opinion upon them' (1852, p.5). Even though the majority were spoiled Soyer refrains from overt criticism, instead offering solutions. He advises that 'official persons, well acquainted with those important processes' oversee canning, and his note of '(especially if those preserved meats are to be cured abroad)', places blame on Goldner (Soyer, 1852, p.5). The majority of Soyer's advice, however, is culinary rather than technological. He recommends that no can contains over 6lbs of meat, and it should be 'seasoned with baysalt, pepper, and aromatic herbs in powder, such as thyme and bay leaf' (Soyer, 1852, p.5). Jelly should not be added but made from the bones, 'without vegetables, well reduced and skimmed [...] this demi-glaze, when diluted in water, would make six gallons of very good broth, of which any kind of soup could be made in a very short time' (Soyer, 1852, p.5). While Soyer writes 'as a well-wisher to the naval profession' (1852, p.5), his notice incorporates a recipe for turning canned meat into stock which would work within the home. Mention of spices and cooking techniques takes canned meat into the realm of the culinary, particularly given Soyer's reputation. Soyer's letter, starkly contrasting the press's fearmongering, instead situated canned foods in a narrative where they are appealing.

Collisions between advocates and critics of canned meats were sometimes present in the same text. Isabella Beeton's best-selling *Book of Household Management* (1861) suggests that if a household cannot get live turtle for turtle soup, canned turtle may be used: purchased for 'about £2' per 4lb can (1861, p.100). Counterintuitively, Beeton implies that live turtle was cheaper than canned turtle, 'ranging from 8d. to 2s. per lb, depending on supply and demand', meaning canned turtle cost 10s. per lb, whereas live turtle cost 2s. per lb (1861, p.100). Whether this was a mistake given that Beeton recommends tinned meat when turtle is 'dear' (1861, p.100), it consolidates that canned food served a luxury market, as suggested in *Reynold's Miscellany*. This is the only time Beeton recommends canned meat, but underneath a 'Potted Beef' recipe there is an encyclopaedic entry entitled 'Preserved Meats'. It outlines the naval use of canned meats, noting: 'We are sorry to say that preserved meats are sometimes carelessly prepared, and, though the statement seems incredible, sometimes adulterated' (Beeton, 1861, p.299). The use of canned meats was therefore embroiled in issues of class and luxury. Beeton's positioning of this 'incredible' (1861, p.100) entry underneath a recipe for home-preserved beef highlights that canned foods were acceptable when providing exotic ingredients to those who could afford them, but canned mutton and beef were unappetising, best kept in the navy. The juxtaposition between these passages illustrates the unevenness of canned meat's reception: even within the same text, perceptions on canning depended upon prescribed meanings.

Despite continued disparaging, canned mutton and beef had defenders who sought to make a case for their economy and flavour. In 1874, Charles Buckmaster published *Buckmaster's Cookery*, a cookbook and abridgement of lectures delivered to the Cookery School of London at the International Exhibitions of 1873 and 1874, with one chapter entitled 'Australian Meat'. Longer distances, as meat imported from Argentina, North America and Australia became more prevalent, necessitated increasingly effective preservative methods and Buckmaster outlines four: freezing, tinning, concentrating and the antiseptic process. Concentrating involved reducing meat by simmering it in stock or water to make an extract, while the antiseptic process used 'sulphurous acid and other chemicals [...] to prevent the decomposition of fresh meat by excluding the oxygen of the air' (Buckmaster, 1874, p.104). Mechanized refrigeration was not successful until the *SS Strathleven* sailed from Sydney to London in 1879, and according to Buckmaster, concentrating uneconomically reduced the yield of meat and the antiseptic method left an unpleasant chemical taste. Buckmaster declares: 'For the present we must rely on meats preserved in tins, and to this there are really only two valid objections, the price and the over-cooking' (1874, p.105). Though cheaper than turtle, canned beef and mutton were not yet thrifty, 'cost[ing] threepence' to prepare, 'and this makes the process

expensive' (Buckmaster, 1874, p.105). Buckmaster, however, asserts they *were* economic given that 'you have 4lbs. of solid cooked meat, without bone, which are equal to at least 6lbs. of butcher's meat' (1874, p.107). Aiming at eaters across the social strata, Buckmaster declares: 'Prejudice against preserved meat can only be gradually overcome by the middle and upper classes eating it' (1874 p.106), and his means of convincing the middle- and upper- classes to try it enlists material culture and culinary trends.

Buckmaster presents three recipes with canned meat as the main ingredient. A 'Gravy Soup' recipe outlines boiling the can and adding water, before skimming the fat and consuming. Buckmaster suggests the soup is served in 'a soup tureen' (1874, p.106), clearly aiming at the middle and upper classes, as working-class cooks were unlikely to own specialised crockery. Buckmaster uses presentation and material objects to culturally elevate this dish, dressing it up to target certain members of society. While not 'the most expensive soup brought to the table' like Beeton's turtle soup (1861, p.100), by presenting Gravy Soup in a tureen, Buckmaster gives readers a dish they could serve at a dinner party. His 'Julienne Soup' recipe adds finely sliced vegetables and butter to the soup, while the meat is removed, resulting in a delicate broth for impressing guests. Buckmaster's final recipe, 'Croquets of Australian Meat', explicitly presents canned meat as fashionable through Buckmaster's statement: 'Croquets are considered rather a delicacy' (1874, p.107). Buckmaster advises croquets 'may be made with the remnants of game, chicken, fish, potatoes, mushrooms, sweetbread, lobster, rabbit, &c.', before using Australian meat (1874, p.107). Listing these ingredients before the recipe inadvertently suggests that Australian meat is preferred. By arguing for the thrifty *and* luxuriant use of canned meats, Buckmaster gives canned meat multiple attributes. The middle and upper classes can use it to create fashionable dishes, simultaneously saving themselves money. Moreover, if the middle and upper classes use canned meat, prejudice against it will subside. Buckmaster thus presents canned meat so economy and luxury do not clash but cooperate, making a case for the widespread adoption of economic food by appealing to the middle and upper classes. While canned meat eventually became cheaper and accessible to the working classes, Buckmaster merges divergent narratives, disrupting the critique of canned foods by appealing to different audiences.

There is no doubt that the uptake of canned meat in Britain was not smooth. The Portsmouth scandal and the press's derision of canned food are well-documented, and the condemnation of canned meats enlisted fearmongering rhetoric to frame canned foods as dangerous, disgusting and immoral. Looking aside from this, however, and a more complicated story emerges. The disparaging of canned meat was contested and disrupted, and supporters of canned foods tactically enlisted narratives other than technological. Canned meat was portrayed as a threat to British prosperity, yet counterarguments posited that it gave Britons an Imperial advantage. Derision of readers

who believed the press, made canning an indicator of literary taste. Soyer and Buckmaster recognised that with culinary imagination, canning could benefit domestic kitchens and soldiers alike. Tensions between Beeton's support of luxury canned meat and suspicion of beef and mutton indicate how far social acceptance factored into perceptions, while Buckmaster's use of canned meats as a fashionable ingredient refigured the socially acceptable. All of these narratives – Imperialism, class, taste, intelligence, fear and control – contest and disrupt each other. Rejection of canned meat was not straightforward, and nor was the presented and questioned by producers and users. To eat canned meat, then, was not simply consumption, but an act flavoured by human discussion, opinion and disagreement.

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